

**MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)**

**SUBJECT:** Bonneville Project, Fishway and Fish Activities for **Week 11** of 2022, which covers the period from **06 to 12 March 2022**.

**1. OPERATION SUMMARY:**

- a. Daily average river flows ranged from 188.1 to 199.4 kcfs. Daily average powerhouse forebay elevation ranged from 72.8' to 74.1' msl. Daily average project tailwater ranged from 16.1' to 16.7' msl. Secchi disk measurements ranged from 5.0' to 7.0+'. Daily average water temperature remained at 39°F.
- b. Daily average spill ranged from 1.3 to 19.4 kcfs.
- c. Unit Operation: **PH2** remains the priority powerhouse. Main unit drawdowns are measured every Monday and more frequently as needed.
- d. Navlock 2: BON Navlock 2 was taken out of service at 0600 on 13 February for annual winter maintenance and returned to service at 1430 on 10 March.

• **Table 1. Main Unit Outages**

<b>Unit</b>	<b>OOS</b>	<b>RTS</b>	<b>Reason</b>	<b>Duration</b>
13	1628 on 18 Feb	---	F.O., Generator Ground	---
16	0802 on 28 Feb	---	P.O., BPA Work, RC #4 Relay Replacement	---
15	0802 on 28 Feb	---	P.O., BPA Work, RC #4 Relay Replacement	---
17	0803 on 28 Feb	---	P.O., BPA Work, RC #4 Relay Replacement	---
18	0803 on 28 Feb	---	P.O., BPA Work, RC #4 Relay Replacement	---
8	1355 on 10 March	---	F.O., High EMI Reading/Bus Inspections	---

- e. Fish Units: Second Powerhouse Fish Units provide attraction flow for the Washington Shore (WS) fish ladder.

Fish Unit Outages: Fish Units are periodically placed into reserve service (RS) to float trash when debris differentials become excessive and trash raking is not possible.

• **Table 2. Fish Unit Outages.**

<b>Unit</b>	<b>OOS/RS</b>	<b>RTS</b>	<b>Reason</b>	<b>Duration</b>
F2	0010 on 13 Dec	---	P.O., Bi-Annual Maintenance/Extended Outage	---

- **Table 3. Fish Unit Drawdowns, in Feet.**

<b>Date</b>	<b>F1</b>	<b>F2</b>
03/06	1.2'	---
03/07	0.1'	---
03/08	0.1'	---
03/09	0.3'	---
03/10	0.3'	---
03/11	0.2'	---
03/12	0.2'	---

**2. MAINTENANCE ACTIVITIES:**

- a. Auxiliary Water System Closures: Nothing to report.
- b. STS/VBS Inspections: Nothing to report.
- c. Dewatering and Fish Salvages: Nothing to report.

**3. RESEARCH:**

- a. Four Peaks Environmental - Fish counting contract: Daytime video counting (0400 to 2000 PDT) began on 01 December. Fish counts can be viewed [here](#).
- b. USFWS – Lamprey Metamorphosis Study: Juvenile lamprey researchers are onsite, and the work is underway.
- c. Pacific States Marine Fisheries Commission - Smolt Monitoring: Sample collections at the SMF began at 0700 on 02 March. Debris at the primary dewatering structure (PDS) and fish/debris separator was light consisting mostly of sticks. Kelt observations will be monitored by direct observation from Smolt Monitoring Personnel and video recording by the Fisheries Field Unit (FFU) and SMP at least until the Kelt Trigger (20 total steelhead kelt including two kelt on two consecutive days) is reached. 1 steelhead fallback was observed this week. Year-to-date total is 1. No fish collections for research purposes were conducted this week. More details can be found on the [FPC web page](#).  
The Bonneville SMF was placed in bypass mode at 0700 on 11 March. This action was taken in response to an emergency release of 1.1 million Tule fall Chinook from Spring Creek NFH on 10 March due to an outbreak of Bacterial Gill Disease (BGD). To prevent exposure of this pathogen to run-of-river fish in their collection tanks, the sampling will remain suspended until the bulk of these fish have passed the project.

**4. FISHWAYS:**

- a. Project biologists inspected from 06 – 12 March.
- b. Fish Passage Plan observations:

• **Table 4. FPP Items Out of Criteria.**

Date	Location	FPP Violation	Cause	Response
03/06-12	BON	Unit Priority	U13 F.O., Generator Ground	Repairs in Process
PH1				
03/06-12	PH1 ITS	S. End Gate Inoperable and Chain Gates 1a & 1b Closed	S. End Gate Inoperable, 1a and 1b Closed for Safety Reasons	W.O.
03/06-12	PH1CC	FG 2-19 Stuck in the Mostly Closed Position, Should Be Open	Mechanically Bound	W.O.
03/07	PH1CC	S. Ent. Diff. <1.0'	Sensor Issues	Ops/Electricians Notified
Bradford Island				
03/11	BI Fishway	FV 3-7 High	Unknown	Ops Notified
03/06,07	A-Branch	Weir Staff Gauge >1.1'	Unknown	N/A
Cascades Island				
03/06-12	CI Fishway	FG 6-11 Mechanically Bound in the Closed Position, Should Be Open	Mechanically Bound	W.O.
Washington Shore				
03/06-12	PH2	Weir 37 Staff Gauge High, >1.1'	Gear box failure	Closed and pending repair
03/07,09,10	PH2	Weir 38 Staff Gauge High, >1.1'	N/A	N/A
03/07-09,12	PH2	PH2 SDE Ent/TW Diff Low, <1.0'	Single Fish Unit Ops	N/A

- 5 avian lines were cut from the B2CC avian line array on 02 September. Avian lines are installed by 10 April every year and normally remain up as a form of avian abatement through the start of winter when they may be taken down if winter maintenance activities require. These 5 lines were damaged and hanging extremely low to the water, creating a hazard for a survey vessel entering BON BRZ for a hydrosurvey on 03 September 2021. These avian arrays are slated to be re-installed during March 2022.
- PH1 Collection Channel diffuser FG 2-19 was found mechanically bound in the mostly closed position on 02/24/22 by PH1 Mechanics. No repairs can be made until the PH1CC can be dewatered in the next Oregon Fishway Winter Maintenance Period (winter 2023/2024).
- The Cascades Island Fishway diffuser FG 6-11 is mechanically bound in the closed position due to stripped shaft threads. A work order has been created and repairs will be made during the next Washington Shore/Cascades Island Fishway Winter Maintenance Period (winter 2022/2023).

c. Adult Fishways:

- (1) The AFF was watered up on 14 March.
- (2) Sensor calibrations were conducted on 09 March.
- (3) SLEDs are installed at all locations.
- (4) Bradford Island, Cascades Island, and Washington Shore Fishways are in service.

d. Juvenile Fishways:

- (1) The ITS remains in service (auto-chain gates 3B, 6C, & 10B only).

- (2) The hydro-cannon remains in service.
  - (3) The B2CC was opened from 1200 on 09 March to 1315 on 12 March during spill operations requested by BPA.
  - (4) The DSM remains in service.
  - (5) STSs remain in service.
- e. Lamprey Fishways:
- (1) BI, CI, and WA Shore LPS's remain out of service.
  - (2) The Bradford Island Wetted Wall (BIWW) remains out of service.
  - (3) The PH2 Lamprey Flume Structure (LFS) remains out of service.
  - (4) The AFF and CI lamprey traps remain out of service.
- f. Avian Monitoring: Avian counts are recorded 01 April – 31 October.

## 5. WATER QUALITY MONITORING:

- a. Fishway Temperatures: Temperature monitoring concluded for the season on 09 October 2021.
- b. Zebra Mussel Monitoring: No signs of colonization were observed this reporting week.

## 6. CONSTRUCTION: Nothing to report.

## 7. HAZMAT, SPILLS AND CLEANUP: Nothing to report.

## 8. TELETYPES CURRENTLY IN EFFECT:

- A teletype was sent out on 01 September with revisions to fall/winter spill priority list and fall/winter spill caps provided the order that projects spill for lack of load conditions. This order is to be used until further notice. Please see teletype BON R 090121 1544 for details.
- A teletype was sent out on 22 December outlining BON tailwater operations for chum spawning. This teletype replaces BON R 102721 1011 for Chum Spawning 1. Please see teletype BON R 121521 1449 for further details.
  1. Effective Friday, December 24, 2021, at 0001 hours, until further notice, the Bonneville Dam minimum tailwater elevation is 13.0 feet during all hours.
  2. The intent of this operation is to ensure sufficient tailwater elevation to protect chum redds in the Ives/Pierce Island area during the egg incubation period.
  3. The official project tailwater elevation gauge is located on the Oregon shore at river mile 144.5, 0.9 miles downstream of Powerhouse 1 and 50 feet upstream of Tanner Creek.
- A teletype was distributed on 01 March detailing a “no spill operation” for Bonneville Lock & Dam. This teletype requests BPA to not spill at Bonneville for the following dates and times:
  1. 14 March – 17 March, 0600 – 1900 HRS
  2. 21 March – 24 March, 0600 – 1900 HRS
  3. 28 March – 31 March, 0600 – 1900 HRS
  4. 04 April – 07 April, 0600 – 1900 HRS

If spill is necessary during these times, the Corps requests that BPA makes best efforts to shape spill outside the dates and times above. This request is to provide safe working conditions for USGS conducting fish tissue sample study in the Main Dam Forebay BRZ. The PH2 Corner Collector (B2CC) will continue

to operate as described in the 2021 Fish Passage Plan, see section 2.3.2.5.V. For further details, please see teletype BON R 030122 0834.

- A teletype was sent out on 16 March concerning the operation of the Powerhouse 2 Corner Collector (B2CC). It states effective immediately and continuing through Sunday 20 March at 1300 HRS, BON is to operate the B2CC continuously. The goal of this operation is to avoid collection of the juvenile hatchery salmon released from the Spring Creek National Fish Hatchery (SCNFH) infected with Bacterial Gill Disease (BGD) in the BON Smolt Monitoring Facility (SMF). More information of this incident can be found in the Memorandum for the Record (MFR) 22BON005, “Early Release of 10.8M Tule Fall Chinook from SCNFH” dated 14 March 2022 on the FPOM website. Once this operation is complete, BON is to resume operation of the B2CC as described in the Fish Passage Plan (FPP), Section 2.3.2.5.v. For more information, please see teletype BON R 031622 1208.

MICHAEL ADAMS, P.E.  
Operations Project Manager  
Bonneville Project